

Please add the following new claims:

- ~~24~~²³. (new) The medium of claim ~~21~~²⁵, wherein the process further comprises:
maintaining one or more lists of the first set of system resources.
- ~~32~~²⁴. (new) The medium of claim ~~23~~²⁴ in which the one or more lists are linked lists.
- ~~27~~²⁵. (new) The medium of claim ~~21~~²⁵ in which the first set of system resources comprise processing entities.
- ~~33~~²⁶. (new) The medium of claim ~~25~~²⁷ in which the processing entities comprise processes which are categorized into process types.
- ~~34~~²⁷. (new) The medium of claim ~~26~~³³ in which the act of preserving the state of the first set of the system resources comprises suspending the state of one or more of the processes in the first set of system resources.
- ~~35~~²⁸. (new) The medium of claim ~~26~~³³ in which the one or more processes to suspend are suspended by being entered into an idle loop.
- ~~36~~²⁹. (new) The medium of claim ~~26~~³³ in which the one or more processes to suspend are suspended by an operating system scheduler.
- ~~37~~³⁰. (new) The medium of claim ~~26~~³³ in which the one or more processes to suspend are selected based upon their process type.
- ~~28~~³¹. (new) The medium of claim ~~21~~²⁵ in which the second set of system resources comprise system resources that have been set aside for diagnostic purposes.
- ~~29~~³². (new) The medium of claim ~~21~~²⁵ in which the second set of system resources comprises redundant hardware/software components.

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~~33~~. (new) The medium of claim ³⁸~~22~~, wherein the process further comprises:
maintaining a redundant system component for the first computer system; and
shifting control of the redundant system component to the second computer system after the
failure.

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~~34~~. (new) The medium of claim ³⁹~~33~~ in which the redundant system component comprises a disk
drive.

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~~35~~. (new) The medium of claim ³⁸~~22~~ in which the one or more resources comprise one or more
processing entities.

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~~36~~. (new) The medium of claim ⁴⁰~~35~~ in which the one or more processing entities comprise
processes.

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~~37~~. (new) The medium of claim ⁴⁰~~35~~ in which the act of preserving the state of one or more
resources on the first computer system comprises suspending the one or more processing entities.

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~~38~~. (new) The medium of claim ⁴⁶~~37~~ in which the one or more processing entities are suspended
by being entered into an idle loop.

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~~39~~. (new) The medium of claim ⁴⁶~~37~~ in which the one or more processing entities to suspend are
suspended by an operating system scheduler.

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~~40~~. (new) The medium of claim ³⁸~~22~~ further comprising the act of categorizing the failure into a
failure type, and in which the failure type corresponds to the choice of the one or more resources to
suspend.

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~~41~~. (new) A system for diagnosing a computer system after a failure comprising:
a preservation module for preserving the state of a first set of system resources after the
failure occurs in the computer system;

an access module for accessing the computer system by utilizing a second set of system resources; and

a diagnosis module for diagnosing the failure by analyzing one or more resources from the first set of system resources.

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~~42~~. (new) The system of claim ⁴⁹~~41~~ further comprising:

a list maintenance module, for maintaining one or more lists of the first set of system resources.

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~~43~~. (new) The system of claim ⁵⁰~~42~~ in which the one or more lists are linked lists.

⁵¹
~~44~~. (new) The system of claim ⁴⁹~~41~~ in which the first set of system resources comprise processing entities.

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~~45~~. (new) The system of claim ⁵¹~~44~~ in which the processing entities comprise processes which are categorized into process types.

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~~46~~. (new) The system of claim ⁵⁷~~45~~ in which the preservation module preserves the state of the first set of the system resources by suspending the state of one or more of the processes in the first set of system resources.

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~~47~~. (new) The system of claim ⁵⁸~~46~~ in which the one or more processes to suspend are suspended by being entered into an idle loop.

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~~48~~. (new) The system of claim ⁵⁸~~46~~ in which the one or more processes to suspend are suspended by an operating system scheduler.

⁶¹
~~49~~. (new) The system of claim ⁵⁸~~46~~ in which the one or more processes to suspend are selected based upon their process type.

⁵²
~~50~~. (new) The system of claim ⁴⁹~~41~~ in which the second set of system resources comprise system resources that have been set aside for diagnostic purposes.

⁵³
~~51.~~ (new) The system of claim ⁴⁹~~41~~ in which the second set of system resources comprises redundant hardware/software components.

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~~52.~~ ~~(new) A system for diagnosing a computer system after a failure comprising:~~
a failure detection module, for detecting a failure on a first computer system;
a fail-over module, for implementing fail-over to a second computer system after detecting the failure on the first computer system;
a resource preservation module, for preserving the state of one or more resources on the first computer system;
an access module, for accessing the first computer system to diagnose the failure; and
~~a diagnosis module, for diagnosing the failure by analyzing the one or more resources.~~

⁶³
~~53.~~ (new) The system of claim ⁶²~~52~~ further comprising:
a redundant system component for the first computer system; and
a control module for shifting control of the redundant system component to the second computer system after the failure.

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~~54.~~ (new) The system of claim ~~53~~ in which the redundant system component comprises a disk drive.

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~~55.~~ (new) The system of claim ~~52~~ in which the one or more resources comprise one or more processing entities.

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~~56.~~ (new) The system of claim ~~55~~ in which the one or more processing entities comprise processes.

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~~57.~~ (new) The system of claim ⁶⁴~~55~~ in which the preservation module preserves the state of one or more resources on the first computer system by suspending the one or more processing entities.

Added ⁷¹58. (new) The system of claim ⁷⁰~~57~~ in which the one or more processing entities are suspended by being entered into an idle loop.

⁷²59. (new) The system of claim ⁷⁰~~57~~ in which the one or more processing entities to suspend are suspended by an operating system scheduler.

⁶⁵60. (new) The system of claim ⁶²~~52~~ further comprising a categorization module for categorizing the failure into a failure type, in which the failure type corresponds to the choice of the one or more resources to suspend.
